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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,535

09/24/2003

Cliff Evans

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4628

7590

01/26/2005

Intellectual Property Law Department  
Schlumberger-Doll Research  
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EXAMINER

ESTRADA, ANGEL R

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,535

Applicant(s)

EVANS ET AL.

Examiner

Angel R. Estrada

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 19-41 and 46 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6, 7, 10, 12, 14, 17 and 45 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9, 13, 15, 16, 18, 42-44 and 47-50 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/26/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed November 26, 2004 has been considered by the Examiner.

### ***Claim Objections***

2. Claim 11 is objected to because of the following informalities:  
  
Claim 11 line 8, "the microship", lacks antecedent basis. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 line 1, the word "standard" makes the claim indefinite because it is not clear what is a standard swage lock.

Any further rejection of claim 5 in this office action is based on claim 5, as they are understood by the examiner.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, 13, 15, 16, 42-44 and 47-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedden, Jr (US 3,148,356, hereinafter Hedden).

Regarding claim 1, Hedden discloses an electrical feedthru apparatus (10) comprising: a core (12) comprising an electrical insulator (column 2 lines 15-38), the core (12) having an external surface; an electrically conductive transmission line (14) disposed across a portion of the external surface (see figure 1); and an insulating mold (62,64 or see figures 7,8,10,11 and 13, defined by the printed circuit board) disposed around the electrically conductive transmission line and the external surface (see figure 11).

Regarding claim 2, Hedden discloses the electrical feedthru apparatus (10), further comprising a channel formed in the external surface (column 2 lines 57-63), wherein the electrically conductive transmission line (14) is disposed in the channel and bonded thereto (see figure 1).

Regarding claim 3, Hedden discloses the electrical feedthru apparatus (10), wherein the core (12) comprises an axial centerline (see figure 1), and wherein at least a portion of the electrically conductive transmission line (14) is not parallel to the axial centerline (see figure 2).

Regarding claim 4, Hedden discloses the electrical feedthru apparatus (10), wherein the core (12) is generally cylindrical (see figure 1).

Regarding claim 9, Hedden discloses the electrical feedthru apparatus, wherein the core (12) comprises injection molded plastic (column 2 lines 25-31 and 57-63).

Regarding claim 13, Hedden discloses the electrical feedthru apparatus (10), further comprising a plurality of electrically conductive transmission lines (14) spaced around the external surface (see figure 1).

Regarding claim 15, Hedden discloses the electrical feedthru apparatus (10) wherein the electrically conductive transmission line (14) is connected to a standard electrical connector (see figures 7, 12, 10 and 13).

Regarding claim 16, Hedden discloses the electrical feedthru apparatus (10), wherein the electrically conductive transmission line (14) is substantially flush with the external surface (see figure 1).

Regarding claim 42, Hedden discloses an electrical feedthru (10) comprising: a disk (see figure 13) comprising an electrical insulator (column 2 lines 15-38), the disk (see figure 13) having an external surface; and a plurality of electrically conductive transmission lines (14) disposed across a portion of the external surface (see figure 13); the disk extending between first and second distinct environments (see figure 13).

Regarding claim 43, Hedden discloses the electrical feedthru apparatus (10), further comprising a plurality of channels disposed in the external surface (see column 2 lines 57-63), wherein each of the plurality of electrically conductive transmission lines (14) is disposed thereto in one of the plurality of channels and is bonded (see figure 13)

Regarding claim 44, Hedden discloses an electrical feedthru apparatus (10), comprising a disk (see figure 2) comprising an electrical insulator (column 2 lines 15-38); the disk (see figure 2) having an external surface (see figure 2); and a plurality of electrically conductive transmission lines (14) disposed across a portion of the external surface (see figure 2) wherein the disk comprises a central axis and a tapered first end; and wherein the plurality of electrically conductive transmission lines (14) is not parallel to the central axis (see figure 2).

Regarding claim 47, Hedden discloses the electrical feedthru apparatus (10), wherein the external surface comprises a curved surface (see figure 1), and the insulating mold abuts the curved surface (see figures 8, 11 or 13).

Regarding claim 48, Hedden discloses the electrical feedthru apparatus (10), wherein the insulating mold (62,64 or see figures 7, 8, 10, 11 and 13) circumscribes the curved surface, but only extends longitudinally along a portion of the curved surface (see figures 8, 11 or 13).

Regarding claim 49, Hedden discloses the electrical feedthru apparatus (10), wherein the core (12), the electrically conductive transmission line (14), and the insulating mold (62,64) are adapted to extend between two distinct environments (see figure 11).

Regarding claim 50, Hedden discloses an electrical feedthru (10) comprising: a disk (see figure 13) comprising an electrical insulator, the disk having an external circumferential surface (see figure 13), a plurality of electrically conductive transmission

lines disposed across a portion of the external circumferential surface (see figure 13);  
an insulating mold (see figure 13) layered over the external circumferential surface.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hedden, Jr (US 3,148,356, hereinafter Hedden) in view of Bickford et al (US 6,506,083, hereinafter Bickford).

Regarding claim 8, Hedden discloses the mold (see figure 11 and 13) being made of plastic (column 3 lines 10-14), but does not specify that the plastic is PEEK (polyetheretherketone). Bickford teaches an electrical feedthrough (2) having a mold

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(14) being made out of PEEK (column 2 lines 45-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Hedden's mold out of PEEK as taught by Bickford, since PEEK is well known in the art as an excellent thermoplastic material that is hard and stiff with good thermal and mechanical properties.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hedden, Jr (US 3,148,356, hereinafter Hedden) in view of Tower (US 6,111,198).

Regarding claim 18, Hedden discloses the transmission line (14) conducts electricity, so the line is made of a certain kind of metal; but lacks the metal being copper. Tower teaches an electrical feedthrough (20) having a transmission line (130,135,140) made of copper (column 4 lines 63-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to Hedden's transmission lines out of copper as taught by Tower, since copper is well known in the electrical art for its superior conductivity.

#### ***Allowable Subject Matter***

7. Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The primary reason for the indication of the allowability of claim 5 is:



Regarding claim 5, the prior art does not teach or fairly suggest in combination with the other claimed limitations the mold being shaped to fit into a swage lock.

This limitation was found in claim 5, and is neither disclosed nor taught by the prior art of record, alone or in combination.

8. Claims 6, 7, 10, 12, 14, 17 and 45 are allowed.

The following is an examiner's statement of reasons for allowance: The primary reason for the indication of the allowability of claim 10 is:

Regarding claim 10, the prior art does not teach or fairly suggest in combination with the other claimed limitations a microchip adhere to the core, wherein the microchip is wire-bonded to the electrically conductive transmission line.

This limitation is found in claim 10, and is neither disclosed nor taught by the prior art of record, alone or in combination.

9. Claim 11 would be allowable if rewritten or amended to overcome the objection(s) under Claim Objections set forth in this Office action.

### ***Response to Arguments***

10. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

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11. Applicant's arguments with respect to claim 10 have been considered and are persuasive.

In response to the applicant's argument the Examiner agrees that neither Goldfarb (US 4,654,472) nor the cited prior art teach, disclose or suggest in combination with the other claimed limitation a microchip adhere to an electrical insulator core.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loosme (US 3,638,163) discloses an electrical feedthru apparatus.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


14. Any inquiry concerning this communication should be directed to Angel R. Estrada at telephone number (571) 272-1973. The Examiner can normally be reached on Monday-Friday (8:30 -5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 Ext: 31. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 21, 2005

 1/24/05  
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